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7. (once amended) The bumper according to claim 1 wherein a front portion of the matrix located proximate the elongated beam is substantially flush with a front portion of the foam portion along an interface defined between the beam and the foam portion.

12. (once amended) The bumper according to claim 10 wherein the high-density panel is selected from the group consisting of high-density foam, high-molecular weight structural foam molding, high-density composite material, polyester sheet-molded material, vinyl-ester sheet-molded material, thermoplastic composite, bulk-molded compound, and high-molecular weight injection molded polyethylene.

13. (once amended) A bumper for mounting on a frame of a vehicle, the bumper comprising:

an elongated beam configured to be operatively mounted to the frame of the vehicle; a foam portion extending along a portion of the beam;

a fascia surrounding the foam portion, the fascia and the foam portion operatively attached to the beam;

the foam portion having a plurality of recesses formed therein, the recesses extending through a predetermined thickness of an inside portion of the foam portion;

a non-metallic/integrated cylindrical cell matrix disposed with the recesses, the matrix formed of a plurality of cylindrical cells having a longitudinal axis, the cell matrix releasably secured within the recesses after formation of the foam portion; and

the matrix configured to absorb energy resulting from impact force applied to an external portion of the bumper in a direction generally along the longitudinal axis.